A. CLASSIFICATION OF SUBJECT MATTER IPC 7 G04B19/04 G04B19/20

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols) IPC 7 G04B

Documentation searched other than minimum documentation to the extent that such documents are included. In the fields searched

Electronic data base consulted during the International search (name of data base and, where practical, search terms used)

## EPO-Internal

C. DOCUM	ENTS CONSIDERED TO BE RELEVANT	
Category °	Citation of document, with Indication, where appropriate, of the relevant passages	Relevant to claim No.
X	DE 20 15 446 A (BAUMANN, HANS) 12 November 1970 (1970-11-12)	1,3,6, 11,12
A	figures 1-4	2,4,5, 7-10, 13-15
	<pre>page 2, lines 3-13 page 3, line 3 - page 4, line 10 page 8, line 5 - page 9, line 7</pre>	
X	US 4 939 708 A (PINCEMY LUCE R G) 3 July 1990 (1990-07-03) figures 1,6-8	1,12
Α .	claim 1	2-11, 13-15
	-/	

Further documents are listed in the continuation of box C.	Patent family members are listed in annex.
"Special categories of cited documents:  "A" document defining the general state of the art which is not considered to be of particular relevance  "E" earlier document but published on or after the International filling date  "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)  "O" document referring to an oral disclosure, use, exhibition or other means  "P" document published prior to the International filing date but later than the priority date claimed	"T" later document published after the International filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention.  "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone.  "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.  "&" document member of the same patent family
Date of the actual completion of the International search  5 July 2004	Date of malling of the international search report  14/07/2004
Name and mailing address of the ISA  European Patent Office, P.B. 5818 Patentiaan 2  NL - 2280 HV Rijswijk  Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,  Fax: (+31-70) 340-3016	Authorized officer  Burns, M



onal Application No
PCT/ 3/04657

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT	in jerales.
Category ° Citation of document, with Indication, where appropriate, of the relevant passages	Relevant to claim No.
DE 37 31 872 A (ROEDER NORBERT DR) 4 August 1988 (1988-08-04) 6 figures 1-7	1,12 2-11, 13-15
column 1, line 61 - column 4, line 8	
	·

Form PCT/ISA/210 (continuation of second sheet) (January 2004)

## INTERNATIONA EARCH REPORT

tional Application No							
PCT,	03/04657						

Patent document cited in search report		Publication date	Patent family member(s)		Publication date
DE 2015446	A	12-11-1970	CH CH DE	534379 B 702169 A 2015446 A1	15-11-1972 15-11-1972 12-11-1970
US 4939708	A	03-07-1990	FR CA DE EP ES	2627296 A1 1326372 C 68901401 D1 0329553 A1 2032114 T3	18-08-1989 25-01-1994 11-06-1992 23-08-1989 01-01-1993
DE 3731872	Α	04-08-1988	DE DE	8701133 U1 3731872 A1	30-04-1987 04-08-1988